

IN THE CLAIMS:

The following is a listing of all the claims as they currently stand. Claims 1-12 have been previously canceled. In addition, kindly cancel claims 13-23 and add claims 24-43, as noted below.

1-23. (Canceled)

24. (New) A surgical instrument comprising:

an elongate member comprising a proximal portion, a bendable and steerable distal portion, and an inner lumen;

an end effector coupled to the bendable and steerable distal portion of the elongate member;

an actuator assembly coupled to the proximal portion of the elongate member, the actuator assembly comprising a linkage positioned within the inner lumen, wherein a first end of the linkage is coupled to the end effector and a second end of the linkage is releasably coupleable to a robotic manipulator assembly.

25. (New) The surgical instrument of claim 24, wherein the inner lumen receives one or more control wires for controlling steering of the distal portion of the elongate shaft.

26. (New) The surgical instrument of claim 25, wherein a first end of the control wires are coupled to the bendable and steerable distal portion of the elongate member and a second end of the control wires are coupled to the actuator assembly.

27. (New) The surgical instrument of claim 26, wherein the actuator assembly comprises one or more control motors coupled to the control wires to operate the control wire(s).

28. (New) The surgical instrument of claim 24, wherein the actuator assembly comprises a movable actuator pin laterally extending from the linkage and extending through an axially extending slot in the elongate member to releasably couple the actuator assembly to the robotic manipulator assembly.

29. (New) The surgical instrument of claim 24, wherein longitudinal movement of the second end of the linkage actuates the end effector.

30. (New) The surgical instrument of claim 24, wherein the end effector comprises jaws, wherein longitudinal movement of the second end of the linkage moves the jaws between an open position and a closed position.

31. (New) The surgical instrument of claim 24, wherein the end effectors are coupled to the bendable and steerable distal portion of the elongate member with a wrist.

32. (New) The surgical instrument of claim 24, wherein the end effector has at least three degrees of freedom.

33. (New) The surgical instrument of claim 24 further comprising a cannula configured to be insertable through a percutaneous incision in the body of a patient during a surgical procedure, the cannula comprising an axial passage for supporting and receiving the elongate member therethrough so that the end effector is disposed adjacent a target site within the body of the patient.

34. (New) The surgical instrument of claim 33, wherein the cannula comprises a force sensing element.

35. (New) The surgical instrument of claim 33, wherein the elongate member of the surgical instrument is rotatable and axially movable within the axial passage of the cannula.

36. (New) The surgical instrument of claim 33, wherein the cannula is substantially rigid and straight.

37. (New) The surgical instrument of claim 33, wherein the cannula defines a longitudinal axis, wherein the end effectors are configured to be movable off of the longitudinal axis of the cannula.

38 (New) A robotic surgical system comprising:
a manipulator assembly comprising an instrument holder; and
a surgical instrument comprising:
an elongate member comprising a proximal portion, a bendable and steerable distal portion, and an inner lumen;
an end effector coupled to the bendable and steerable distal portion of the elongate member;
an actuator assembly coupled to the proximal portion of the elongate member, the actuator assembly comprising a linkage positioned within the inner lumen, wherein a first end of the linkage is coupled to the end effector and a second end of the linkage is releasably coupleable to the instrument holder of the manipulator assembly.

39. (New) The robotic surgical system of claim 38 further comprising a cannula coupled to the instrument holder and configured to be insertable through a percutaneous incision in the body of a patient during a surgical procedure, the cannula comprising an axial passage for supporting and receiving the elongate member therethrough so that the end effector is disposed adjacent a target site within the body of the patient.

40. (New) The robotic surgical system of claim 39, wherein the elongate member of the surgical instrument is rotatable and axially movable within the axial passage of the cannula.

41. (New) The robotic surgical system of claim 38, wherein the manipulator assembly includes a first controllable motor for rotating the surgical instrument about an instrument centerline, a second controllable motor for actuating the end effector on the surgical instrument and a third controllable motor for axially translating the surgical instrument relative to the manipulator assembly.

42. (New) The robotic surgical system of claim 38, further comprising a plurality of different surgical instruments, the surgical instruments sequentially coupleable to the instrument holder of the manipulator assembly so that different surgical instruments may be used during a surgical procedure.

43. (New) The robotic surgical system of claim 38, further comprising an input control device located remotely from the manipulator assembly and coupled to a servomechanism of the manipulator assembly so as to permit an operator to remotely control the surgical instrument with the input control device.